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EXAMINER

BASIAGA, DARIUSZ

ART UNIT PAPER NUMBER

2128

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,962

Applicant(s)

KOLB ET AL.

Examiner

Dariusz K. Basiaga

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Objections

1. The examiner objects to the dependence of Claim 9. Claim 9 depends upon itself. Examiner interprets the dependence of claim 9 on claim 8. Therefore, the examiner interprets that claim 9 reads as follows: **The system of claim 9 8 wherein the removeable non-volatile memory comprises a solid-state memory card.**

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 19 the word "means" is preceded by the word(s) "monitoring, formatting, implementing" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6,8,10-15 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent 6,092,008 by Wesley H. Bateman herein "Bateman".

Regarding Claim 1, Bateman teaches **an aircraft data transmission system comprising: (a) means for monitoring and collecting aircraft data; (b) means for formatting the data or a portion of the data as a binary or text file; (c) means for incorporating the binary or text file into an email message; (d) means for transmitting the email; and (e) communication means for carrying the email transmission to a ground station.** Bateman teaches a "flight event record system" that is capable of monitoring and collecting the aircraft data [Column 4 Lines 54-67, Column 5 lines 55-62]. Applicant claims a means for formatting data as binary and means for incorporating the binary into e-mail message. Bateman teaches formatting and sending the collected data as a binary (digital) file (data) from one computing

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device to another by means of computers networks (aircraft to ground stations) [Column 7, Lines 59-67, Column 8 Lines 1-3, Column 11 Lines 58-67]. In addition, Bateman teaches the means for transmitting the e-mail as per paragraph [0036] in the applicant specifications which states that the means for transmitting the e-mail consists of transmission of text messages between two computing devices over a computer network. Bates teaches transmitting a binary data between the onboard "Flight Event Recording Monitor" FERMONTE and the ground based receiving stations via many different forms of communication techniques including a cellular modem [Column 7 Lines 56-57 and Column 8 lines 1-9]. It is well recognized that a cellular communication system (cellular modem) contains a Short Message System (SMS) which allows for the two computing devices (cell communicators) to transfer binary data (text) via the computer network (cell towers).

Regarding Claim 2, Bateman teaches **the system of claim 1 further comprising a GPS receiver** [Column 4 Lines 19-29, Column 8 Lines 10-21 (G.N.S.S is analogous to GPS) Figures 1,2,3].

Regarding Claim 3, Bateman teaches **the system of claim 2 wherein the communication means comprises a satellite modem and transceiver** [Column 4 Lines 41-45, Column 5 Lines 26-28, Column 11 lines 30-35 and 57-67, Figures 2 and 3] Bateman teaches employing a modem for the communication between the "flight event recorder system" and the satellite/ground.

Regarding Claim 4, Bateman teaches **the system of claim 1 wherein the means for monitoring and collecting aircraft data comprises at least one aircraft databus interface**. Bateman teaches "Flight Event Recording Monitor (FERMONT)" that acts as a central processing gathering and transmitting the data received from the aircraft monitoring sensors [Column 7, Lines 60-67, Column 8 lines 33-43, Column 10 Lines 27-32, Figure 2 and 3].

Regarding Claim 5, Bateman teaches **the system of claim 4 wherein the means for monitoring and collecting aircraft data further comprises at least one discrete input interface**. Bateman teaches employing video cameras connected to the "Flight Event Recording Monitor (FERMONT)" [Column 7, Lines 40-64, discrete inputs can be seen in Figure 2].

Regarding Claim 6, Bateman teaches **the system of claim 1 wherein the binary or text file comprises a summary of the aircraft data or a portion of the aircraft data**. Bateman teaches digitally (binary) transmitting the status of the aircraft from one computing device to another [aircraft to ground/satellite] by means of computer networks [Column 7 lines 60-67, Column 8 Lines 1-10, Column 11 Lines 58-67]. Also, the communication between the FERMOT device and ground station was designed to transfer aircraft status (summary) data [Column 11 Lines 30-54].

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Regarding Claim 8, Bateman teaches **the system of claim 1 wherein the means for monitoring and collecting data comprises random access memory and a removable non-volatile memory.** [Column 9 Lines 60-65, Column 11 Lines 20-53, Figure 3].

Regarding Claim 10, Bateman teaches **the system of claim 1 further comprising a rules database comprising a plurality of aircraft data conditions and related actions, means for monitoring aircraft data and comparing aircraft data to the rules database.** Bateman teaches the "Flight Event Recording Monitor (FERMONT)" that monitors the aircraft for any events that surpass a "normal" threshold. Once such event(s) occurs the event(s) is/are recorded in FERMONT and transmitted to the ground monitoring station [Column 9 Lines 33-39, Column 10 Lines 15-39].

Claim 11 differs from claim 1 only in it's implementation. Claim 1 claims "aircraft data transmission system" whereupon claim 11 claims a "method of transmitting aircraft data". It is clear that since the teachings of Bateman employ transmission of the data then the method performing that specific action is being employed. Therefore the limitations of claim 11 are rejected for the same reasons provided in the discussion of claim 1.

Regarding Claim 12, Bateman teaches **the method of claim 11 further comprising the step of receiving the email at a ground centre and storing the summary file in**

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a database [Column 7 lines 65-67 and Column 8 lines 1-9]. Bateman teaches transmitting a binary message from one computing device to another by means of computer networks (between aircraft and the ground center) [Column 7 lines 60-67 and Column 8 line 1 and Column 11 Lines 58-67] and then storing the received data [Column 7 lines 60-67 and Column 8 lines 1-10].

Regarding Claim 13, Bateman teaches **the method of claim 12 further comprising the step of forwarding the email to a user** [Column 8 lines 1-9].

Regarding Claim 15, Bateman teaches **the method of claim 11 further comprising the step of storing the flight data file onto a removeable non-volatile memory** [Column 9 Lines 60-65, Column 11 Lines 20-53, Figure 3].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,092,008 by Wesley H. Bateman herein "Bateman" in view of applicant own disclosure ¶[0036].

Regarding Claim 14, Bateman teaches **the method of claim 13**. Bateman teaches forwarding the data file **further comprising the step of creating and transmitting a data file** (e-mail well known in the art). Bateman fails to mention that a **second email to a user containing or attaching a data file** is transmitted. However, Bateman does not exactly specifies the number of messages/files that are being transmitted to other servers/users. In addition, Bateman teaches that the data regarding the aircraft status is being transmitted to other servers/users [Column 7 lines 60-67, Column 8 Lines 1-10, Figure 1]. Also, in paragraph 0036 of the applicants' specifications the applicant defines the email as "text messages transmitted from one computing device to another by means of computer networks." Whereupon, Bateman teaches employing a cellular telephone link to communicate with the servers/users, it is well known in the art that the cellular telephone contains a Short Message System "SMS" which allows for text files to be transferred between two computing devices (cellular phone) over a computer network (cell towers). Therefore, it would have been obvious to one of ordinary skill in

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the art that Bateman might as well employ more than one e-mail message (data transmission with data file/text message) during the communication process (multiple communications during the flight).

Regarding Claim 17, Bateman teaches **the method of claim 11 further comprising the steps of (a) monitoring aircraft data and comparing aircraft data to a rules database wherein the rules database defines at least one aircraft data condition and a related action; and (b) taking the action upon the aircraft data matching the aircraft data condition.** Bateman teaches the "Flight Event Recording Monitor (FERMONT)" along with "Flight Event Recording System (F.E.R.S)" that monitors the aircraft for any events that surpass a "normal" threshold (Alert/Alarm System Fig 3. 216,220). Once such event(s) occurs the event(s) is/are recorded in FERMONT and transmitted to the ground monitoring station [Column 8, Lines 33-45, Column 9 Lines 33-39, Column 10 Lines 15-39, Figure 2,3]. It would have been obvious to one of ordinary skill in the art at the time of the invention to realize that since FERMONT along with F.E.R.S record and monitor any event that surpasses a "normal" threshold then the "normal" threshold is a rule stored in the "database" to which the monitor data is compared to and decided if the new data does or does not warrant an "Alert/Alarm Event" [Column 9 Lines 33-39, Column 10 Lines 15-39, Figure 2,3].

Regarding Claim 18, Bateman teaches **the method of claim 17 wherein the action to be taken is chosen from the group consisting of: creating a data file, recording**

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data to a data file, closing a data file, saving a data file to a memory, or creating and sending an data file by email [Column 8, Lines 33-45, Column 9 Lines 33-39, Column 10 Lines 15-39, Figure 2,3].

Claim 19 differs from claims 1 and 17 only in it's implementation. Therefore the limitations of claim 19 are rejected for the same reasons provided in the discussion of claims 1 and 17.

Claim 20 differs from claim 18 only in it's implementation. Claim 20 claims, "means for" whereupon claim 18 claims a "method". It is clear that since the teachings of Bateman employ transmission of the data then the method and means for performing that specific action is being employed. Therefore the limitations of claim 20 are rejected for the same reasons provided in the discussion of claim 18.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,092,008 by Wesley H. Bateman herein "Bateman" in view of Applicant and further in view of United States Patent Application Publication 2001/0036822 A1 by Stephen E. Mead et al. herein "Mead."

Regarding Claim 7, Bateman teaches **the system of claim 6**. Bateman teaches employing data compression and decompression system during the communication process. Bateman fails to explicitly teach that **the means for formatting the data or a**

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portion of the data as a binary or text file comprises means for encrypting the binary or text file. However, Mead teaches an "In-flight E-mail System" employing compression and/or encryption system during transmission between the aircraft and the ground based server [Mead, [0023]]. It would have been obvious to one of ordinary skill in the art to realize that since Bateman teaches compression and it is known in the art that the compressed data does not resemble the original data rendering the original data unreadable without decompression (can be thought of as encryption) and Mead teaches compression and/or encryption of data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bateman with the teachings of Mead in order to enhance the data security during wireless transmission.

6. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,092,008 by Wesley H. Bateman herein "Bateman" in view of Applicant and further in view of United States Patent 4,644,494 by Hans R. Muller herein "Muller."

Regarding Claim 9, Bateman teaches **the system of claim 9** [examiner interprets this as "system of claim 8"]. Bateman teaches a removable non-volatile storage device [Column 9 Lines 60-65] but Bateman fails to explicitly teach that **the removeable non-volatile memory comprises a solid-state memory card**. However, Muller teaches employing a "solid state memory for aircraft flight data recorder systems." Therefore, it

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would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bateman with the teachings of Muller in order to reduce the weight and the initial cost of the memory employed in the "flight data recorder" [Muller, Column 1 Lines 41-50].

Claim 16 differs from claim 9 only in its implementation. Claim 9 claims "aircraft data transmission system" whereupon claim 16 claims a "method of transmitting aircraft data". It is clear that since the teachings of Bateman employ transmission of the data then the method performing that specific action is being employed. Therefore the limitations of claim 16 are rejected for the same reasons provided in the discussion of claim 9.

CONCLUSION

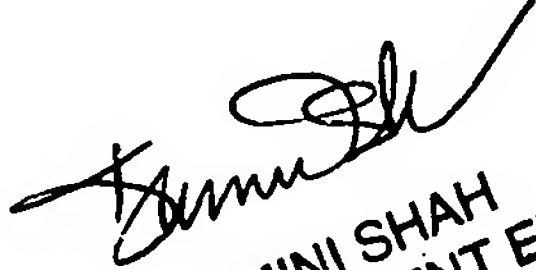
7. Claims 1-20 are rejected

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dariusz Basiaga whose telephone number is (571) 272-7133. The examiner can normally be reached on M-F 9:00 – 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini S. Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KAMINI SHAH
SUPERVISORY PATENT EXAMINER